

121. Significantly, testing of the combined loop and switch is an area where BellSouth fails to provide any specific details or binding commitments, which only increases the likelihood of service problems. In fact, despite AT&T's efforts, BellSouth appears to be unaware of the problem: Mr. Milner asserts (§ 49) that "there will be no significant increase to the loop length as a result of provisioning the unbundled loops to the collocation space," which cannot be true because, as I have noted, the CLEC's collocated space often is located a significant distance, and even on a separate floor, from the frame. Moreover, as another example of the need for specific, binding M&Ps for loop/switch combinations, Mr. Milner asserts that the "CLEC will be responsible" for MLT testing "due to the fact that the loop is not connected to the BellSouth switch." Id. This is plainly true only for "pure" loop unbundling and not combinations, and thus BellSouth must provide a procedure by which MLT testing is performed.

122. In sum, BellSouth's collocation requirement puts unnecessary strain on often already congested frames, substantially increases the risk of human error and mechanical failure, complicates central office maintenance and repair procedures, and disproportionately harms CLECs. It thus needlessly raises the costs of providing local service and seriously hampers CLECs' ability to establish a reputation as reputable providers of quality local exchange service.

**D. Excessive Cost**

123. As shown above, the delay, disruption and discrimination inherent in manual loop/switch recombinations through collocation are themselves sufficient reasons

FCC DOCKET NO. 98-121  
AFFIDAVIT OF ROBERT V. FALCONE

why CLECs could not succeed in providing customers with UNE-based service. Indeed, even if BellSouth provided collocation to AT&T for free, it would still not allow AT&T to use combinations of unbundled network elements to serve customers competitively with BellSouth.

124. Nevertheless, the costs of providing combinations through collocated space provide still more reasons why a collocation requirement is not reasonable and nondiscriminatory. First, contrary to BellSouth's claims, the costs do not significantly vary if CLECs choose to use cageless or virtual collocation instead of physical collocation. Second, in all events, all of the costs, regardless of collocation method, are unnecessary and discriminatory to CLECs. Finally, as to at least one crucial category of costs, BellSouth's costs for collocation rates are both uncertain and unbounded, which, as this Commission already found, is reason enough to reject BellSouth's prior collocation proposal.

125. For every collocation scenario, there are three basic categories of costs: (1) "upfront" costs, including (a) costs to apply for and build the site, (b) costs of purchasing and installing equipment, and (c) costs associated with pre-wiring; (2) MDF manual cross-connects and related "customer migration" costs incurred when the CLEC actually begins serving a customer; and (3) monthly recurring costs associated with operating and maintaining the collocation space, connectivity, and equipment.

126. Each category of costs is substantial. The second category of customer migration costs, which apply to each customer that is cutover for a CLEC, are particularly notable. In Louisiana, these costs include an upfront non-recurring cost per customer of

FCC DOCKET NO. 98-121  
AFFIDAVIT OF ROBERT V. FALCONE

over \$40 for a basic loop and NID, over \$16 for an unbundled port, and over \$23 for each cross-connect required (4 for offices with an IDF, and 2 for other offices).

127. Although BellSouth touts cageless and virtual collocation as easier and cheaper alternatives to physical collocation, Br. at ii, BellSouth's claim is overstated. The substantial customer migration costs apply no matter whether a CLEC is using a physical, cageless or virtual collocation arrangement. In addition, for the other categories of cost, the reduction in costs achieved through cageless or a virtual collocation arrangement may not be competitively significant. Although a CLEC using cageless or virtual collocation would not face the costs of building a collocation cage, it still will incur significant costs associated with the initial phase of collocation, including the application fee, the costs of the equipment installation, as well as the costs of purchasing the collocated equipment.

128. Second, and equally as important, none of the costs associated with any type of collocation are necessary. As I previously discussed, the manual processes associated with collocation are not required to provide UNE-based service and are in fact not incurred by the ILEC, which relies on electronic processes to disconnect and recombine service for its customers that move from existing locations. These costs do not enable CLECs to provide customers with a single additional functionality. In fact, they come at the cost of increased customer outage, lower service quality, and significant gating of competition. Accordingly, CLECs are required under collocation to take on a host of costs that are not incurred by the ILEC. This is plainly discriminatory.

FCC DOCKET NO. 98-121  
AFFIDAVIT OF ROBERT V. FALCONE

129. Finally, one fundamental and obvious defect in BellSouth's collocation costs for Louisiana is that at least one significant cost category is still not defined. Thus, in this application, BellSouth has maintained pricing for space preparation for physical collocation on an "individual case basis" ("ICB"). See Master Collocation Agreement, Exh. A, line 3 and note 2. In responding to BellSouth's identical proposal in its South Carolina application to price space preparation fees using an ICB, the Commission expressly rejected leaving that major component of costs open to further negotiations:

BellSouth's SGAT is deficient because its collocation rates do not include any rates for the space preparation fee. That component of cost is left to further negotiation on an individual case basis. The absence of any space preparation rates creates uncertainty for new entrants and requires further negotiation, undermining the premise of an SGAT. . . . We note the contrast with [BellSouth filings in other proceedings, where] BellSouth identified the charges and the costs for each physical collocation rate element, including rate elements associated with space preparation. . . . [BellSouth's other] tariff filing left no costs open to future negotiation. Accordingly, it is possible for BellSouth to offer generally available terms and conditions, that require no further negotiation, for facilities that appear comparable to those BellSouth would require for combining unbundled network elements."

BellSouth South Carolina Order ¶ 204. In its brief, BellSouth contends that ICB pricing is justified because "it simply is not possible to price many aspects of collocation without considering the needs of the particular CLEC customer." Br. at 35. This claim obviously fails to respond to either the Commission's observation that BellSouth has quantified such

costs in other contexts or to the states that have capped space preparation fees at a fixed rate.<sup>33</sup>

130. BellSouth also argues that it need not provide a fixed price for space preparation because CLECs "may obtain appropriately redacted records regarding similar Louisiana collocation that was priced on an ICB basis." Br. at 35. But this, too, dodges the issue. The limited collocation activity in Louisiana provides no track record for estimating ICB costs. And even if it did, that is simply another reason why BellSouth, and not CLECs, should be required to commit to a figure and stand by it.

131. Specific rates for space preparation fees are vital because space preparation is a major category of "up-front" costs for which existing ILEC rates and proposals vary wildly. This is amply demonstrated by TCG's experience with BellSouth's space preparation fees in Georgia, which were supposedly capped at \$100/sq. ft. See TCG Georgia PSC Collocation Complaint, at 2-12 (Attachment 2). In response to TCG's request for 200 square feet of collocated space in each of three central offices in Georgia, BellSouth quoted space preparation fees of \$139,369, \$81,401, and \$92,690, resulting in rates for space preparation of \$697/sq. ft., \$407/sq. ft., and \$463/sq. ft! Id. at 16.<sup>34</sup> Moreover, a BellSouth

---

<sup>33</sup> See, e.g., Georgia Public Service Commission, Order, In re Review of Cost Studies, Methodologies, and Cost-Based Rates for Interconnection and Unbundling of BellSouth Telecommunications Services, Docket No. 7061-U, at 62, (Dec. 16, 1997) (capping space preparation fees at \$100 per square foot, and recognizing that an ICB rate is "an obstacle to competition because it introduces unnecessary uncertainty into the process").

<sup>34</sup> TCG was also charged an excessive rate for space construction in one of the three central  
(continued...)

FCC DOCKET NO. 98-121  
AFFIDAVIT OF ROBERT V. FALCONE

witness testified in South Carolina that "the range" for space preparation costs "would be tremendous," and while "not unlimited," it could be "cost prohibitive even."<sup>35</sup> As these experiences show, space preparation fees can be very significant and very unpredictable, which makes precise rates all the more essential.

E. A Collocation Requirement Imposes Additional Difficulties for CLECs Seeking To Combine The Switch and Dedicated Transport or The Loop and Dedicated Transport

132. Although my affidavit concentrates on the problems that a collocation requirement imposes upon recombining the loop and the switching elements, BellSouth's collocation policy would also hinder CLECs attempting to combine other network elements. The first such combination involves the unbundled switching element and dedicated transport. Under this scenario, a CLEC may want to purchase the switching elements combined with dedicated transport in order to send its customer's calls to, for example, its OS/DA platform. BellSouth does not describe the terms and conditions for such a combination, but it seems that it will require a CLEC to collocate equipment in the central office, and then combine the switching element with the dedicated transport. In its brief

---

<sup>34</sup> (...continued)

offices. The total of BellSouth's charges in the three offices only for space preparation and space construction exceeded \$390,000, even though the Georgia PSC had set rates that, if BellSouth had not ignored them, would have totaled to \$87,000 for the three offices. As I understand, the complaint was later withdrawn after BellSouth admitted that the rates it proposed were inconsistent with the Georgia PSC's order and the TCG Interconnection Agreement.

<sup>35</sup> Redmond South Carolina Testimony, at 65-66 (Excerpt included as Attachment 17).

AFFIDAVIT OF ROBERT V. FALCONE

and affidavit, BellSouth lists several assembled UNE combinations that it will provide to CLECs, including "port and cross-connect and common transport." Br. at 39 (emphasis added); Varner Aff. ¶ 68. Given the omission of the switching element and dedicated transport from the list, BellSouth will likely require CLECs to combine those elements themselves in collocated space. See id. ¶ 75 ("If a UNE can be physically separated, BellSouth will deliver it on a separated basis.").<sup>36</sup>

133. As with the loop/switch combination, a collocation requirement for CLECs seeking to combine the switching element with dedicated transport would be unreasonable and discriminatory. To combine those elements, a CLEC would need to install in collocated space a digital cross connection frame known as a DSX frame for use with the digital transport trunks. This frame would be in addition to the existing mini-MDF that the CLEC used for combining the loop and the switch. In addition, in most circumstances, depending on the distance of the collocated space from the ILEC's DSX frame, a CLEC would need to purchase and install amplifiers, which requires power to be added to the collocated space. In addition, this arrangement would require a proper central office environment (i.e., power with battery backup, air conditioning, environmental alarms, etc.).

134. In addition to the switch and dedicated transport, BellSouth is also silent regarding terms and conditions for combining unbundled loops with dedicated

---

<sup>36</sup> I note, however, that Mr. Varner's statement quoted in the parenthetical is not true: For example, an ILEC can physically separate the loop from the NID, but BellSouth provides those UNEs on a combined basis.

AFFIDAVIT OF ROBERT V. FALCONE

transport. A CLEC may wish to combine those elements to provide service using its own switch to its customers that are not directly served by a central office where the CLEC has a collocation arrangement. By employing this combination, a CLEC could extend loops served by one central office to the central office where the CLEC has its own switch or to a central office where the CLEC has a collocation arrangement. Again, because the loop and dedicated transport is not included in the list of elements BellSouth is offering to combine, it appears that BellSouth is requiring CLECs to combine those elements in collocated space. Such a requirement would be unreasonable and discriminatory.

135. As with combining the switching elements with dedicated transport, CLECs forced to use collocated space to combine unbundled loops with dedicated transport would need to add equipment to collocated space, pre-wire a complex daisy chain of cables to and from the ILEC's MDF and DSX frames, and use multiple cross-connects on multiple frames. Although BellSouth provides no terms for how it will allow CLECs to combine these elements, based on my discussions with other RBOCs, Figure 7 (Attachment 26) depicts one such arrangement. A CLEC would need to establish collocated space (most likely in a central office environment) and install a mini-MDF, a mini-DSX frame, and amplification equipment, because of the distances involved. As before with the loop/switch combinations, the mini-MDF would be pre-wired to new connector blocks on the existing MDF, and cross-connects would be run from the CLECs' connector blocks to the ILEC's connector blocks.



FCC DOCKET NO. 98-121  
AFFIDAVIT OF ROBERT V. FALCONE

136. With combinations of loop and transport, however, the ILEC connector block on the horizontal side of the frame is hard wired, not to a switch, but to multiplexing equipment, as shown in Figure 7. This equipment changes the analog signal into a digital signal. The multiplexer is connected to the ILEC's DSX frame via an existing hard wired connection. On the DSX, the ILEC will have to cross-connect this multiplexer to an appearance on the frame that cables the arrangement to the CLEC's collocated DSX and amplification equipment, and then back on another series of cables from the CLEC's DSX to another connector block at the ILEC's DSX frame. Finally, cross-connections would be used to complete the daisy chain and connect the multiplexer to the unbundled dedicated transport facility.

137. If an ILEC sought to combine loops with transport, the arrangement, as depicted in Figure 8 (Attachment 27), would be much simpler. The loop would terminate on the connector block on the MDF, and then would be cross-connected to a connector block on the horizontal side of the frame. From that connector block, a hard wired connection would run to the multiplexing equipment, and then to a connector block on the DSX frame. Another cross-connect would be used to run to the other side of the DSX frame, ultimately connecting the loop to the transport.

138. As Figures 7 and 8 show, requiring collocation to combine loops and dedicated transport is discriminatory, unreasonable, and unnecessary. Even if ILECs again insist that the CLEC combine the loop and dedicated transport, a better alternative exists. Under this alternative, a CLEC seeking to combine these elements would require remote

access to the ILEC's DCS (digital cross-connection systems) capability. Such access would allow the CLEC to electronically combine unbundled loops with dedicated transport. Some physical work would still need to be performed on the MDF to run the existing loop into the multiplexer and on the ILEC's DSX frame to connect the multiplexed loops to the DCS system. Even though this work would physically connect the loop and the transport, the elements would not in fact be functional until the CLEC electronically combined the loop and the transport using the remote access capability. Such an arrangement is technically feasible. Indeed, the Commission in the Local Competition Order has already required BellSouth and other ILECs to "provide requesting carriers with access to digital cross-connect system (DCS) functionality." Id. ¶ 444. The FCC noted that ILECs had provided such access to IXC's, which made it technically feasible. Id. Accordingly, BellSouth may not require that CLECs establish collocated space to combine unbundled loops and dedicated transport. Rather, CLECs should be able to use their existing ability to access DCS in order to combine those elements.

**F. For All of These Reasons, State Commissions Have To Date Rejected Collocation Requirements**

139. For each of the reasons I have just discussed, there is a growing consensus among regulators, including several state commissions, that a collocation requirement like BellSouth's should be rejected. First, the Department of Justice concluded on the record of BellSouth's initial 271 application for Louisiana that BellSouth's proposed collocation requirement did not meet BellSouth's obligations under the Act:

AFFIDAVIT OF ROBERT V. FALCONE

CLECs have provided substantial evidence in this proceeding indicating that a collocation requirement would dramatically and unnecessarily increase the obstacles to combining elements, would decrease the quality of service that new entrants are able to provide compared to the incumbent (increasing the risk of service outages), and would severely limit the number of customers that new entrants would be able to serve for the foreseeable future. . . . In light of the cumbersomeness of this approach, we cannot conclude -- at least on the present record -- that BellSouth's offering of collocation satisfies its obligation under section 251(c)(3).<sup>37</sup>

The record BellSouth has established in this second application addresses none of the Department's principal concerns of, among others, decreased service quality, gated entry, and service outages. Accordingly, the Department's conclusions should apply with equal force here.

140. In addition to the Justice Department, several state commissions have concluded on similar records that collocation is not acceptable as the sole means for CLECs to combine UNEs. Thus, the Washington Utilities and Transportation Commission found that GTE's proposal to recombine elements through the use of jumpers "is not desirable from a technological point of view" or from "an economic point of view."<sup>38</sup> As to the technological drawbacks to GTE's manual recombination proposal, the Washington UTC found it technically undesirable because it "requires extra connections (i.e., extra potential

---

<sup>37</sup> Evaluation of the United States Department of Justice, In the Matter of Application By BellSouth Corp., et al., for Provision of In-Region, InterLATA Services in Louisiana, CC Docket No. 97-231 (Dec. 10, 1997), at 14-15.

<sup>38</sup> In the Matter of the Petition for Arbitration of an Interconnection Agreement Between AT&T Communications of the Pacific Northwest, Inc. and GTE Northwest Inc., Washington UTC Order Partially Granting Reconsideration, Docket No. UT-960307 (March 16, 1998), at Section IV (Included as Attachment 28).

AFFIDAVIT OF ROBERT V. FALCONE

service failure points) and coordination between technicians from both companies (i.e., more potential service failure points)." Id. Moreover, "the use of jumpers would put customers out of service for a period of time long enough to discourage customers from switching to AT&T's service." Id. The UTC also concluded that GTE's jumper approach was significantly flawed as an economic matter, because it would "increase costs for both" ILECs and CLECs, and thereby would cause "Washington's consumers to suffer." Id. Accordingly, the UTC found that a manual recombination approach "would not be consistent with the overall goal of a rapid transition to competitive markets because it would hamper entry." Id.<sup>39</sup>

141. Likewise, the Montana PSC rejected collocation as the sole means of access to UNEs, stating that

[c]ollocating a 'cage' and the accompanying cost of connecting with U S WEST's network in every central office and by every CLEC is likely to be quite costly to new entrants and perhaps to U S WEST as well. . . . [Such conditions] may constitute a barrier to entry to CLEC entry, which this

---

<sup>39</sup> In BellSouth's own region, the Florida Public Service Commission has also rejected a collocation requirement. See Florida Public Service Commission, In re Motions of AT&T Communications et al. to Compel BellSouth Telecommunications, Inc. . . . To Set Non-Recurring Charges For Combinations of Network Elements, Docket No. 971140-TP, Order No. PSC 98-08100-FOF-TP (June 12, 1998), at 52-53; see id. at 62-63 ("We conclude further that BellSouth's [collocation] proposal to break apart loop and port combinations that are currently connected, requiring AT&T or MCI to establish a collocation facility where the unbundled loop and the unbundled port would be recombined, is in conflict with the terms of the parties' agreements and the Act as interpreted by the Eighth Circuit.") (Included as Attachment 29).

FCC DOCKET NO. 98-121

AFFIDAVIT OF ROBERT V. FALCONE

Commission cannot support. . . . It makes little economic sense to require the CLEC to invest this heavily to enter the market.<sup>40</sup>

The Michigan Public Service Commission also has found that "nothing" in the Act "requires [CLECs] to interconnect with Ameritech Michigan's network through the use of collocation. Rather, [CLECs] may request interconnection with Ameritech Michigan's network in any technically feasible manner."<sup>41</sup>

142. Finally, the Iowa Board of Public Utilities rejected a proposal by US WEST to collocate elements using an approach U S WEST called a "SPOT frame" which is an area in the central office dedicated to several CLECs for the purpose of combining elements.<sup>42</sup> The Iowa Board found "ample evidence" that "the SPOT frame approach is inefficient, expensive, inconsistent with network security, and provides discriminatory access to UNEs." Id. Because of these limitations, the Board concluded that "the SPOT frame was likely to seriously limit the practical availability of the UNE method of entry." Id. at 23.

---

<sup>40</sup> Public Service Commission of the State of Montana, Dep't of Public Service Regulation, In the Matter of The Petition of AT&T Communications of the Mountain States, Inc., Pursuant to 47 U.S.C. Section 252(b) for Arbitration of Rates, Terms and Conditions of Interconnection With U S WEST Communications, Inc., Docket No. D96.11.200, Order No. 5961d (Apr. 30, 1998), ¶¶ 15-16 (included as Attachment 20).

<sup>41</sup> Opinion and Order, Michigan Public Service Commission, In the Matter of the Application and Complaint of MCIMetro Access Transmission Services against Ameritech Michigan Requesting Non-Discriminatory, Efficient, and Reasonable Loops Using GR303 Capability, Case No. U-11583 (June 3, 1998) (included as Attachment 31).

<sup>42</sup> Iowa Utilities Bd., Docket Nos. AIA-96-1; AIA-96-2, Final Arbitration Decision on Remand, at pp. 22-23 (May 15, 1998) (included as Attachment 32).

AFFIDAVIT OF ROBERT V. FALCONE

As discussed infra, other states' dissatisfaction with collocation has led them to order investigations into alternative methods of combining unbundled network elements.<sup>43</sup>

**G. The Manual Work Involved With Combining UNEs in Collocated Space is Extremely Burdensome and Is Discriminatory Compared to the ILEC's Operations**

143. As each of the foregoing obstacles shows, the manual processes that form the heart of BellSouth's collocation process are time-consuming, inefficient, subject to greater error, and expensive. Equally as important, these burdens of the collocation requirement fall overwhelmingly on the shoulders of the CLECs attempting to rely on these manual processes to win over new customers. These are the reasons why collocation presents such significant barriers to competitive entry by CLECs. These obstacles are both discriminatory and unreasonable, in violation of the Act and the Commission's rules.

144. BellSouth, however, nonetheless contends that the manual processes associated with collocation are not only "neither cumbersome nor labor intensive," but a

---

<sup>43</sup> In addition, several other states have found that BOCs may not physically disassemble their networks before providing UNEs to CLECs. See In the Matter of the Interconnection Contract Negotiations, PSC of Utah, Docket Nos. 96-087-03 and 96-095-01, Order on Reconsideration, at 4-10 (June 9, 1998) ("separating and recombining unbundled network elements ordinarily combined in [U S WEST's] network is illogical, inefficient and violates state and federal law. We find it . . . discriminatory . . .") (included as Attachment 33); In the Matter of AT&T Communications of the Mountain States, Inc. Petition for Arbitration, Idaho PUC, Case No. USW-T-96-15, Order No. 27236, at 4-5 (Dec. 1, 1997) (complete physical separation would "add tremendous financial and technical burdens" to both the ILEC and CLEC "to the extent that the unbundled access requirement of Section 251(c)(3) would never be realized") (included as Attachment 34); cf. Investigation into Rebundling of Telephone Company Network Elements, Conn. DPUC, Docket No. 98-02-01 at 31-33 (July 8, 1998) (requiring platform for a limited time) (included as Attachment 35).

"routine part of local telephone operations and precisely analogous to the manner in which BellSouth establishes service to a customer premises not previously served by its network." Br. at 39; Milner Aff. ¶¶ 24-25; see also Br. at 39 (in combining UNEs through these manual processes, "CLECs will use the same types of cross-connections that BellSouth regularly uses in its retail operations").

145. These assertions are unquestionably false. First, there can be no doubt that manual cutovers of customers on the MDF is both cumbersome and labor intensive. Indeed, in more forthright moments, BellSouth's witnesses describing the cutover of unbundled loops --itself a less complex process than recombining the loop and switch -- admit that it is a "complex offering" where "human error" can and did "resul[t] in" service problems. Milner Aff. ¶ 68; see id. ¶ 74 (admitting that "the loop cutover is much more complicated in terms of work steps (both on the BellSouth part of the network as well as the CLEC's part)" than an electronic process); cf. Attachment 1, Joel Aff. ¶¶ 22, 29, 34-41 (describing problems associated with manual processes and the efforts of engineers over the last century to eliminate them from the network, and particularly in the central office).

146. BellSouth alleges that "to speed and simplify" these manual processes, "a CLEC may pre-wire its frame, thus avoiding any need to coordinate customers with BellSouth or to crowd the distribution frame with more than one technician." Br. 39; Milner Aff. ¶ 25. This explanation is simply not responsive. First, pre-wiring by a CLEC does nothing to minimize the extensive manual processes that must occur at the MDF in order to perform the necessary cutovers -- and thus the frame will be crowded with at least two teams

of technicians assigned to do nothing but the work associated with recombinations.

Moreover, whether or not a pre-wired frame is in place, the CLECs will still have valid concerns that the ILEC will not have or will be unable to place sufficient numbers of technicians to perform all the manual work that will be required to provision service to the large numbers of CLEC customers. See supra Part III.B.2. Likewise, the use of a pre-wired frame still does not remove the coordination that is required, for example, to establish methods and procedures for keeping the inventory of all the changed cross-connects. As I have demonstrated, the manual processes involved with collocation that create all the barriers to competition apply fully even where pre-wired frames exist. Thus, BellSouth's claims that recombining elements via collocation is not labor intensive fail to come to grips with any part of my analysis.

147. Equally flawed are BellSouth's assertions that the manual processes associated with combining elements in collocated space are "routine" and "regularly use[d]" by BellSouth "in its retail operations." First, as noted earlier, BellSouth typically does not make any changes to cross-connects when an existing customer moves out of its location or when a new customer moves into an existing location. See supra ¶ 63 & n.16. Rather, the connections are left in place, and service is disconnected via the electronic recent change process. It is this type of customer change that is "routine" in BellSouth's operations and that is "precisely analogous" to a CLECs' winning of a new customer. BellSouth's is therefore incorrect in asserting that it "uses cross-connects to combine facilities" in these cases, "just as CLECs will do" Br. 39. Because BellSouth does not change cross-connects in



FCC DOCKET NO. 98-121  
AFFIDAVIT OF ROBERT V. FALCONE

those circumstances, it is discriminatory to force CLECs to make these changes, which is precisely what collocation does.

148. Second, when BellSouth does employ manual processes to install service, those situations occur under competitive conditions that are entirely different from the CLECs' reliance on manual processes to provision the loop/switch combination. BellSouth and other ILECs need to install new cross-connects, for example, where a customer is being cutover to Centrex service or where new construction is occurring. As discussed earlier, BellSouth is aware of both when and where it will be performing this manual work well in advance of the scheduled work date, making it much easier to perform the work. By contrast, with combining UNEs in collocated space, the manual work will come in unpredictable numbers, at numerous and widespread locations, and with the obligation to be completed very short time frames. Thus, the ILECs use of manual processes does not occur "just as CLECs will do." Br. 39; Milner Aff. ¶ 24. Simply because an ILEC uses manual processes in these limited cases does not demonstrate that it is just and nondiscriminatory to require CLECs to use them in all cases.

149. The manual processes operate in a discriminatory fashion to CLECs even when considering the ILEC's winback of a CLEC customer. When a CLEC wins a customer from the ILEC, at least two cross-connects are required to be installed, and sometimes four where an IDF is in place.<sup>44</sup> If an ILEC were to win back a customer from

---

<sup>44</sup> Mr. Milner asserts (¶ 48) that a CLEC could reduce the number of cross-connects by  
(continued...)

FCC DOCKET NO. 98-121  
AFFIDAVIT OF ROBERT V. FALCONE

the CLEC, then it would need only to install the one cross-connect (or two where an IDF is used) to restore the service. Thus, the manual processes will always work to the disadvantage of the CLEC.

150. Finally, the ILECs are fundamentally inconsistent in their approach to human error. When it comes to discussing CLEC proposals that involve certified technicians having access to ILEC equipment, BellSouth and other ILECs invariably and immediately point to the risk of human error as a reason to reject such an approach. If that is a valid concern, then it is a concern many times over for BellSouth's proposal, which places every CLEC customer at the mercy of manual labor performed by BellSouth technicians.

**IV. ALTERNATIVES TO COLLOCATION FOR RECOMBINING THE LOOP AND SWITCHING ELEMENTS**

151. Based on all of the faults I have identified above, collocation has crippling disadvantages as a method for CLECs to recombine UNEs. For that reason, AT&T and other CLECs have invested significant time to develop alternative proposals to

---

<sup>44</sup> (...continued)

leaving in place, after a winback, the cross-connect leading from the switch port to the connector blocks used by the CLEC. However, such a proposal requires that the switch port associated with that wiring be left vacant and not be re-used for the customer that is switching service. This makes no sense from a technical standpoint, because those resources are scarce and the customer could otherwise remain assigned to that switch port. This is likely the reason why, as is typical, BellSouth nowhere commits in binding and concrete terms to allow CLECs to employ the procedure Mr. Milner advocates.

AFFIDAVIT OF ROBERT V. FALCONE

combine UNEs to provide competitive local service. As a result of these inquiries, AT&T, other CLECs, and state commissions have found that collocation is not the only technically feasible method available for the separation and recombination of network elements. There exist other arrangements, both manual and electronic, that would also permit the recombination of network elements and that likely would avoid much of disadvantages of collocation, while providing the same or superior levels of network security. Further, in contrast to collocation, many of these other arrangements do not require a CLEC to provide its own facilities in order to purchase UNEs, and thus permit CLECs "to provide telecommunications services completely through access to the unbundled network elements of an incumbent LEC's network." Iowa Utilities Board, 120 F.3d at 814. Nevertheless, none of these arrangements eliminates the problem of customer service outages, and each has additional distinctive disadvantages that further hamper competitive entry using combinations of network elements. Thus, although none of these alternatives can possibly be as efficient as requiring the ILECS to provide existing combinations, they are all technically feasible, and therefore must be implemented by the ILEC upon request.

152. Unfortunately, BellSouth has refused to afford serious consideration to any of these alternatives -- even though it does not contend they are technically infeasible. Instead, BellSouth has insisted that it may dictate the terms of CLECs' access to unbundled elements, and has limited that access to one method -- collocation.

153. Thus, as early as January 6, 1998, AT&T sent a letter to BellSouth that, among other things, requested that BellSouth investigate the feasibility of at least four other

AFFIDAVIT OF ROBERT V. FALCONE

methods for CLECs to recombine UNEs that BellSouth seeks to break apart. See Letter of Jim Carroll, AT&T, to Duane Ackerman, BellSouth, January 6, 1998 (Attachment 36).

Rather than engage in a dialogue on the merits of the various proposals, BellSouth sat on the proposals for more than two months, without any comment, before responding. When it finally did respond, it re-affirmed that it "offers collocation as the means to combining such elements." See Letter of Quinton Sanders, BellSouth, to Ray Crafton, AT&T, at 1-2 (March 17, 1998) (emphasis added) (Attachment 37).

154. As for the proposals presented by AT&T, it rejected each one in just a few sentences, citing unexplained "risk[s] of disruption of service." Id. at 2. Dissatisfied with BellSouth's response, AT&T continued to press BellSouth to investigate these alternatives. AT&T held a meeting with BellSouth on May 18, 1998, which I attended, to obtain further information about these alternatives and BellSouth's reasons for rejecting them. Once again, however, BellSouth refused to budge, insisting that CLECs use collocation and continuing to assert, but never backing up, claims of service disruption with the alternatives. See Letter of Quinton Sanders, BellSouth, to Raymond Crafton, AT&T (June 18, 1998) (rejecting again AT&T's alternatives to collocation) (Attachment 38).

155. BellSouth's curt rejections come nowhere near its burden of providing "clear and convincing evidence" of "specific and significant adverse network impacts" that would render any alternative technically infeasible. For example, in the May 18th meeting, BellSouth's representatives told me that the recent change alternative was technically feasible. Indeed, in this application, BellSouth claims only that alternatives proposed by AT&T and

AFFIDAVIT OF ROBERT V. FALCONE

other CLECs are "technically impractical," Varner Aff. ¶ 76 (emphasis added), which is well short of the FCC's standard of technically infeasible. Because these alternatives are in fact both practical and feasible, and offer significant advantages over collocation, BellSouth is required to investigate these alternatives, and may not simply dictate collocation, with its significant competitive drawbacks, as the only method for CLECs to combine UNEs.

156. In fact, state commission across the country in various regions are already examining these alternatives to collocation. Most notably, the Texas Public Utility Commission has already required SBC to "offer at least . . . three methods to allow CLECs to recombine UNEs," including the recent change alternative proposed by AT&T.<sup>45</sup> In addition, the Staff of the California Public Utilities Commission recently stated that it "is concerned that Pacific's [collocation-based] options for combining UNEs are costly, slow, and may not have equivalent reliability as Pacific's retail operations. . . . Staff will explore various options, including the use of the recent change capability, that do not require competitors to own their own facilities."<sup>46</sup> In addition to Texas and California, several other

---

<sup>45</sup> Commission Recommendation, Public Utility Co. of Texas, Investigation of Southwestern Bell Telephone Company's Entry Into the Texas InterLATA Telecommunications Market, PUC Project No. 16251, at 4 (adopted May 21, 1998) ("Texas PUC 271 Order") (included as Attachment 39).

<sup>46</sup> Initial Staff Report, California Public Utilities Commission, Telecommunications Division, Pacific Bell and Pacific Bell Communications Notice of Intent to File Section 271 Application For InterLATA Authority in California, Case No. U 1001 C, at 46-47, (July 10, 1998) (included as Attachment 40).

AFFIDAVIT OF ROBERT V. FALCONE

state commission, including those in New York,<sup>47</sup> Colorado,<sup>48</sup> Vermont,<sup>49</sup> and Massachusetts<sup>50</sup> are holding proceedings to investigate the propriety of these alternative methods for combining UNEs. And, of course, this Commission recently sponsored a forum to consider these alternatives.

157. Given the views of these state commissions, the significant disadvantages of collocation, and the Act's requirements that ILECs offer access to UNEs under any technically feasible method, there is simply no justification for BellSouth's insistence on collocation and its hasty rejection of the alternatives presented by AT&T, other CLECs and state commissions. Of the numerous alternatives, I review several here. I note

---

<sup>47</sup> Proceeding on Motion of the Commission to Examine Methods by which Competitive Local Exchange Carriers Can Obtain and Combine Unbundled Network Elements, New York PSC, Case No. 98-C-0690 (May 6, 1998) (included as Attachment 41).

<sup>48</sup> In re The Investigation and Suspension of Tariff Sheets filed by US West Communications, Inc. With Advice Letter No. 2617, Regarding Tariffs For Interconnection, Local Termination, Unbundling, and Resale of Services, Colorado PUC, Docket No. 96S-331T, Decision Regarding Commission Authority to Require Combination of Network Elements, Decision No. C98-267 (Feb. 18, 1998), at 10 (included as Attachment 42).

<sup>49</sup> Investigation into New England Telephone and Telegraph Company's (NET's) tariff filing re: Open Network Architecture, including the unbundling of NET's network, expanded interconnection, and intelligent networks in re Phase II, Module Two, Vermont Public Service Bd., Docket No. 5713, Order of Hearing Examiner, (May 12, 1998) (included as Attachment 43).

<sup>50</sup> Consolidated Petitions Pursuant to Section 252(b) of the Telecommunications Act of 1996, Massachusetts D.P.U./D.T.E. 96-73/74 et al., pp. 13-14 (March 13, 1998) (finding that "provisioning UNEs solely through collocation may not be adequate to meet the Act's UNE provisioning requirements in Subsection 251(c)(3); "insistence on collocation as the only answer to the UNE question very well may not meet the Act's Section 251 interconnection requirements as they relate to UNEs") (included as Attachment 44).

both the advantages and disadvantages in each of the methods in the hope that the Commission will, at the very least, require ILECs to pursue these alternatives with interested CLECs.

**A. Manual Recombination At The MDF**

**1. Direct Separation and Recombination**

158. One possible alternative would be to eliminate all use of additional wiring, connector blocks, and frames by performing the separation and recombination directly at the MDF. To separate the functionality of the loop from the functionality of the switch, it is sufficient for an ILEC technician to disconnect the cross-connect at one terminal on a connector block. Once that separation is made, the loop and switch are no longer physically connected, and the customer's phone cannot be used to make or receive calls until the loop is reconnected to (or recombined with) the switch. To recombine the loop and the switch, it is sufficient for a CLEC technician then to reconnect the cross-connect at the terminal.

159. In the example I just described, one can picture an ILEC technician and a CLEC technician standing shoulder-to-shoulder at the frame. The ILEC technician would disconnect the wire and the CLEC technician would then reconnect it. The interruption to the customer's service and the chances for a misconnection would be minimized. The CLEC technician could ensure that the cutover occurred when the customer was not on the line. The ILEC technician could supervise the work of the CLEC

technician, thereby fully addressing any network security concerns that an ILEC might raise about granting CLEC technicians unsupervised access to its MDF.

160. This direct separation and recombination approach would eliminate any need for establishing collocation space, and also eliminate any need for the many tie cables, connector blocks, cross-connections, and frames that collocation would require. This, in turn, would reduce the start-up time needed before loop/switch provisioning could begin, as well as the cost to both CLEC and ILEC. Equally important, this approach would eliminate the new points of failure introduced by the ILECs' collocation requirement, thereby reducing the degradation in service quality that is inevitable with collocation. It would also eliminate the complications that collocation and its associated additional wiring would create for the CLEC's use of the switch's MLT capabilities; because the length of the loop would remain the same as it was before, no recalibration of the MLT function or reengineering of the loop would be needed in order to assure the continued accuracy of test results and service quality.

161. Of course, this approach has significant drawbacks as well. It does not offer a solution for separating and recombining IDLC loops, thus making it impossible for CLECs to serve these customers using a loop/switch combination. As customer churn develops, the repeated unwrapping and rewinding of the same cross-connect is likely to lead to inadvertent breakage. When that occurs, and if there is not enough slack left in that wire for it to be reused (which often will be the case), then the technician will need to replace the entire cross-connect, a much longer process and during which the customer will be



completely out of service. And while labor time and cost is significantly reduced over collocation, this approach still is significantly labor-intensive and likely to gate entry. Not only are two technicians required for each order, but no work could proceed unless the two were present simultaneously at the MDF. The need to coordinate the schedules of both an ILEC and CLEC technician would inevitably introduce provisioning delay (not simply for the initial provisioning of a new CLEC customer, but as customer churn develops, for switching customers among CLECs and back to the ILEC.) And apart from scheduling problems, it is undesirable to require two individuals to perform work that -- if it is going to be performed at all -- clearly could be accomplished just as effectively but far more efficiently by one person alone.

162. While most of these problems appear inherent in the direct separation approach, the problem of the need for two shoulder-to-shoulder technicians could be addressed through a jointly-retained third-party vendor. Instead of using two technicians, the CLEC and ILEC could jointly retain an ILEC-approved third-party vendor. The ILEC would retain the vendor for the purpose of disconnecting the wires, and the CLEC would retain the vendor for the purpose of reconnecting the wires. Both the disconnect and the reconnect job would be performed in sequence for any particular order, with the ILEC and CLEC paying their respective shares of the costs. Working from M&Ps jointly developed and approved by the ILEC and CLEC, the third party vendor could more efficiently implement the direct physical separation and recombination approach than with two shoulder-to-shoulder technicians.